REMARKS

Claims 12-22 and 24 are pending in this application. Claim 23 has been canceled without prejudice or disclaimer. Claim 24 has been newly added. Support for this claim can be found at page 16, lines 4 and 5 of the specification (page 4, paragraph 0042 of the published application US 2007/0178408 A1). No new matter has been introduced by this amendment.

Foreign Priority

The Office has acknowledged receipt of foreign priority document JP2004-018472 filed on January 27, 2004, but has suggested in paragraph 2 (page 2 of Office Action) that in order to benefit from the earlier filing date, a certified English translation is required. An applicant is entitled to make a claim for foreign priority along with a certified copy of the priority application without supplying a translation. MPEP 201.14. The only time during ex parte prosecution that an examiner considers the merits of applicant's claim of priority is when a reference is found having an effective prior art date between the date of foreign filing and the date of filing in the U.S. MPEP 201.15. Where an applicant relies on the foreign filing date for the purposes of overcoming the effective prior art date of a reference, a translation is then required if the foreign priority papers are not in the English language. Otherwise, a translation should not be required. Nevertheless, an English-language translation of the priority document is enclosed.

Rejection: § 102(b) - Husemann

Claim 23 has been rejected under 35 U.S.C. § 102(b) as anticipated by Husemann et al. (U.S. Patent 6,512,022). The Office argues that Husemann et al.

teaches a backing (3) having an acrylic composition (2) deposited thereon (column 4, lines 56-57).

Claim 23 has been canceled so this rejection is moot.

Rejection: § 103(a) - Kannurpatti et al.

Claims 12-18, 19-20 and 22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kannurpatti et al. (US Pg-Pub 2002/0123003) in view of Yatsuyanagi et al. (U.S. Patent 5,362,604). Kannurpatti et al. is said to teach a laser engravable flexographic printing element comprising a laser engravable reinforced elastomeric layer on a support. The support may be in sheet form or in the form of a cylinder (0027). The elastomeric composition may be reinforced by overall exposure to UV radiation to effect photohardening (0031), and subjected to laser engraving (0032) that includes removal of material in three dimensions. The Office acknowledges that Kannurpatti et al. does not teach the recited illuminance of light features of the claimed invention.

The Office relies on Yatsuyanagi et al. as teaching the overall exposure of a photosensitive composition that could be used in a flexographic printing plate to UV light at 4000 mJ/cm^2 to convert them to cured films. According to the Office, it would be obvious to use the exposure intensity taught by Yatsuyanagi et al. to obtain the recited illuminance of light. This rejection is respectfully traversed.

First, it should be pointed out that the Office has apparently confused the concepts of the recited illuminance intensity and exposure energy. Table 1 below summarizes and compares the used exposure parameters and their results from the Examples and the Comparative Examples based on the disclosures of the specification.

Table 1

	Exposure parameter			Results
	Illuminance with UV-35	Illuminance with UV-25	Total Exposure Energy with UV-35	Cutting and polishing process
EX. 1-7	100 mW/cm^2	14 mW/cm^2	4000 mJ/cm^2	Good
EX. 9	31.3 mW/cm^2	3.95 mW/cm^2	4000 mJ/cm^2	Good
Comp EX. 5	3.1 mW/cm^2	1 mW/cm^2	4000 mJ/cm^2	Poor

Please note that the exposure energy (mJ/cm^2) and illuminance intensity (mW/cm^2) are independent parameters, of each other. Even though the Total Exposure Energy shows the same value of 4000 mJ/cm^2, it does not indicate that the value of Illuminance Intensity is the same.

Second, please note that the Illuminance Intensity that satisfies the range specified in claim 12 achieves advantageous effects of "obtaining a smooth surface without cut marks etc. even after the cutting and polishing process", which is not disclosed or suggested in the prior art documents. Comparative Example 5 of the present specification, which has the same Exposure Energy of 4000 mJ/cm^2, but its Illuminance Intensity is outside the range recited in claim 12, fails to obtain a smooth surface without cut marks etc. after the cutting and polishing process.

The teaching of the exposure by Yatsuyanagi et al. does not render obvious the present invention even combining a printing plate produced by overall exposure

disclosed by Kannurpatti. As the Examiner indicates, Yatsuyanagi et al. teaches exposure of films formed by a pressing machine to UV light (column 12, lines 8-14). However, this UV exposure was carried out for measuring physical properties of a printing plate to be produced (tensile strength, elongation at break, rubber hardness, water resistance, alkali resistance and IPA resistance at room temperature and resolution), but not overall exposure for producing a printing original plate as one can recognize from the disclosure of Yatsuyanagi et al. on column 12, lines 15-18 and TABLE 1. As described at column 8, lines 19-24 of Yatsuyanagi et al., the technology of Yatsuyanagi et al. is directed to obtaining a desired printing plate by exposure and development processes based on the principle of photolithography.

Accordingly, it would not have been obvious to one of ordinary skill in the art at the time of the invention to apply the disclosure of Yatsuyanagi et al. at column 12, lines 8-14 to the technology of Kannurpatti et al., since the technology of Yatsuyanagi et al. relates to obtaining a printing plate by photolithographic patterning whereas the technology of Kannurpatti et al. relates to obtaining a printing plate patterned by laser engraving on a printing original plate which had been produced by over-all exposure, and each technology belongs to different technical fields.

While the Office has noted that Yatsuyanagi et al. teaches the exposure at 4000 mJ/cm^2 at column 12, lines 8-14, this does not necessarily mean that "(the illuminance of light at the surface of the elastomeric layer/photosensitive layer) is $100mW/cm^2$ when measured with UV-35 filter and 14 mW/cm^2 when measured with UV-25 filter" (Office Action on page 5, bottom line). Relationship between the energy of light "J" (Joule) and illuminance intensity of light "W" (Watt) is represented by the following equation:

J (Joule) = W (Watt) X sec

See, e.g., attached Wikipedia disclosure. It is clear that the unit of "mJ/cm^2", which is described on pages 69, 72, 73, 77, 82 and 84 of the specification of this application and on column 12, lines 8-14 of Yatsuyanagi et al., indicates "the total energy of light irradiating a surface of 1 cm^2".

Yatsuyanagi et al. only discloses an exposure of light having an energy of 4000 mJ/cm^2, but there is no teaching or suggestion for an illuminance intensity (mW/cm^2) or irradiation time (sec) of light, so the feature of claim 12 (20 mW/cm^2 at 350 nm and 3 mW/cm^2 at 250 nm) cannot be deduced from the disclosure of Yatsuyanagi et al. Moreover, the specification of this application discloses the "high-illuminance light is generally avoided as light that is applied to the photosensitive resin composition through the light exposure mask film (i.e., pattern formation by photolithography) when fine patterns are formed" on page 23, lines 1-11.

As discussed above, Yatsuyanagi et al. discloses on column 8, lines 19-24 that it relates to a technology of obtaining a desired printing plate by exposure and development processes based on the principle of photolithography (i.e., pattern formation by photolithography). So, one of ordinary skill in the art would recognize that Yatsuyanagi et al. performed an exposure process by irradiating a photosensitive resin composition with the light with a low illuminance intensity for a long period of time until the total energy reached 4000 mJ/cm^2.

In summary, although Kannurpatti et al. discloses a process for producing a printing plate by laser engraving a printing plate which has been obtained by an overall exposure of a photosensitive composition to UV radiation, Kannurpatti et al. is silent

about the specific wavelength or the intensity of UV rays to be used for irradiation. Yatsuyanagi et al. relates to a different process of producing a printing plate by photolithography. While Yatsuyanagi et al. discloses UV radiation at 4000 mJ/cm^2, it never discloses or suggests either the wavelength of light or the illuminance intensity of light. Accordingly, there is no disclosure in Yatsuyanagi et al. that either expressly or inherently would lead to the light exposure according to the claimed invention.

In a process of photolithography such as used in Yatsuyanagi et al., the exposure step is generally performed by using a monochromatic light source at a low illuminance intensity. Consider, for example, the disclosure in paragraph 0026 of JP 2002-268828A to Katsuya Nakano (assigned to the assignee of the present application - Asahi):

> A printing plate has been produced according to a standard printmaking process from this photosensitive resin component. That is, each photosensitive resin component was placed on an exposure device (Asahi Chemical Ind. Co., Ltd., AFP-1500), and removed a cover sheet. A reference negative film having an image of 133 lines/inch, halftone dots at a concentration of 1%, convex lines with a 100 μm width and valley lines with a 500 μm width was placed on a slip layer, covered with a vacuum sheet and adhered to the photosensitive resin component by using a vacuum device. In order to adjust the height of a relief, back exposure at 240 mJ/cm^2 was carried out by using a UV lamp (Philips Co. Ltd., 60W-10R lamp) on the side of a support component layer, and then, relief exposure was carried out at 8000 mJ/cm^2 on the side of the image by using another UV lamp having the same performance to that used in back exposure. The intensities of the UV lamps were measured by using an actinometer (Orc Manufacturing Co., Ltd., MO-2 UV-35 filter). The lower-side UV lamp for the use of back exposure was 4.0 mW/cm^2, and the upper-side UV lamp for the use of relief exposure was 7.9 mW/cm^2.

Accordingly, the illuminance of the light typically used in photolithographic applications falls below and outside the range required by the present claims. Accordingly, for all the reasons discussed above, this rejection should be withdrawn.

Rejection: § 103(a) - Yokoto et al.

Claims 12-13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. (US Pg-Pub 2004/0157162) in view of Yatsuyanagi et al. (US Patent 5,362,604). Yokoto et al. is said to teach a process, similar to the claimed invention, of making a laser engravable printing element. Although Yokoto et al. is stated to disclose the crosslink-curing of the photosensitive resin composition with UV light, the Office correctly acknowledges that Yokoto et al. fails to teach the light exposure conditions recited in these claims. Similar to the first rejection discussed above, the Office relies on the teachings of Yatsuyanagi et al. for a light exposure that is alleged to fall within the scope of the present claims.

For the reasons fully discussed above, which are incorporated herein by reference, Yatsuyanagi et al. neither explicitly nor inherently teaches or suggests a light exposure with the recited illuminance intensity. Neither Yokoto et al. nor Yatsuyanagi et al., alone or in combination, establishes a prima facie case of obviousness of the claimed invention. Accordingly, this rejection should be withdrawn.

Rejection: § 103(a) - Kannurpatti et al., Yatsuyanagi et al., Wally et al.

Claim 21 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kannurpatti et al. in view of Yatsuyanagi et al. and Wally et al. (U.S. Patent No. 4,641,958). Claim 21 is dependent on any one of claims 12-14 and is considered patentable over the cited references for the same reasons that have been discussed

above with respect to the rejections of claims 12-14. Wally et al. was only cited to show features which were added in dependent claim 21, and do not teach or suggest the recited parameters of the recited light application step, and specifically the recited illuminance of light. Accordingly, this rejection should be withdrawn.

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Enclosures: English translation of JP 2004-018472
Wikipedia definition (Joule)
JP 2002-268228 (published 09/13/2002)